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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/818,560

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Makoto Sato

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EXAMINER

JOHNSON, TIMOTHY M

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 04/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,560

Applicant(s)

SATO ET AL.

Examiner

Timothy M Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 11-13, 27-37, 41-44, 47-50 and 53 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 is/are allowed.
- 6) ☒ Claim(s) 18-26, 38-40, 45, 46, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____ |

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Election/Restriction

1. Claims 11-13, 27-37, 41-44, 47-50, and 53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in paper no. 5.
2. Applicant's election without traverse of species IV, claims 1-10, 14-26, 38-40, 45-46, and 51-52 in Paper No 5 is acknowledged.

Claim for Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119 (a)-(d), which papers have been placed of record in the file.

Drawings

4. Figures 17A-D should be designated by a legend such as --Prior Art-- as only that which is old is illustrated. (See MPEP § 608.02(g)).

A proposed drawing correction or corrected drawings are required in reply to this Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Disclosure

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

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The Examiner suggests the following title:

"Subband Region Image Coding And Decoding Using Different Resolutions For Compositing".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 18-26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Shimada et al., 2001/0002851.

For claim 18, an image processing apparatus comprising an encoding section and a decoding section is provided by Shimada in at least paragraphs 748, 765, 768, and 769, and Fig. 73, where explicit reference to video images in compressed formats is provided in a server-client system, and where the images must be decoded to be displayed. The encoding section comprising means for encoding an input image to generate encoded data is provided by Shimada in at least paragraph 769, and additionally, at least inherently, since the compressed video images noted in at least paragraphs 748, 765, 768, and 769 are encoded, and therefore must have been input to be encoded. Means for receiving a designation of an image quality for display of the input image, and means for outputting, of the encoded data, encoded data necessary to

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display the input image at an image quality equal to or higher than the designated image quality is provided by Shimada in at least paragraph 769, where an image quality is clearly designated and outputted. Said decoding section comprising means for decoding the encoded data output from said encoding section to generate image data is at least inherently provided by Shimada, since the images must be decoded in order to be displayed as noted in paragraphs 751-754 and 785-794 for example. Means for, when an image based on the image data has an image quality higher than the designated image quality, converting the image data into image data having the designated image quality is provided by Shimada in at least paragraphs 100, 102, 793, and 794 for example (and 807 for another method).

For claims 19-23, see the rejection of at least claim 18.

For claims 24-26, see the rejection of at least claim 18. Additionally, Shimada provides for a program in at least paragraphs 732-733, for explicit reference to a program and software.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 38-40, 45-46, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chui et al., 6,041,143, in view of Yamaguchi et al., 5,978,514.

For claim 38, an image processing apparatus for encoding an image and outputting encoded data, comprising first encoding means for segmenting the image into a plurality of subbands by discrete wavelet transformation is provided by Chui in at least the paragraph bridging cols. 4-5 and the first full paragraph in c. 5 by a wavelet transformation that generates layers of sets of coefficients. Means for segmenting an image of each subband into regions of a predetermined unit is provided by Chui in at least the paragraph bridging cols. 5-6, where segmentation of the image of the subbands into predetermined specific sized regions is provided. See also Yamaguchi in at least the paragraph bridging cols. 27-28, which codes the image including shapes using subbands that can be coded using blocks such as in c. 21, lines 20-42, and the paragraph bridging cols. 21-22. Determination means for determining a type of the image of each region is not explicitly provided by Chui; although Chui provides for user selection of an image region in at least Fig. 9 and c. 8, lines 15-58, which at least corresponds to some type the user selects. In any case, this is clearly provided by Yamaguchi in at least c. 18, lines 13-53. Using the determination of a type of image as taught by Yamaguchi can be used in conjunction with the selected region of Chui noted above, and as both are in the same field of compressing specific regions of an image using wavelet transforms. It would've been obvious to one having ordinary skill in the art at the time the invention was made to determine a type of the image of each region,

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since this provides for automatic determination of a region to produce with higher fidelity. Second encoding means for executing quantization and entropy encoding for the image of each region to generate encoded data of each region is provided by Chui in c. 3, lines 58-65. Means for receiving an input of a resolution of a decoded image, which is to be used upon decoding the encoded data; and output means for outputting, of the generated encoded data, data necessary to generate the decoded image having the input resolution, wherein for a specific type of image, said output means outputs, of the encoded data, data necessary to generate the decoded image having a resolution higher than the input resolution is provided by Chui in at least c. 3, line 56 – c. 4, line 8, and c. 8, lines 15-55, where encoded data is outputted and received for decoding at a higher resolution level for a specific type, and Yamaguchi provides for determining a region type as noted above.

For claim 39, see the rejection of at least claim 38 above, where the specific type region is decoded at a higher resolution than remaining regions.

For claim 40, the apparatus according to claim 39, wherein said apparatus further comprises means for forming a first decoded image having the resolution, and means for forming a second decoded image on the basis of the encoded data of the region corresponding to the specific type of image, and the region corresponding to the specific type of image forms a decoded image having a resolution higher than that of remaining regions by compositing the first and second decoded images is provided Chui where

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cited above, and c. 8, line 60 – c. 9, line 11, for decoding by synthesizing or “compositing” the different images at different layers and for displaying the multi resolution image, and also in c. 9, lines 30-60, where the specific region includes several images at different resolutions, and c. 7, lines 24-63, teach that more images from different resolution levels are used to construct the specific region than other regions. See also Fig. 53, block 730, of Yamaguchi for explicitly synthesizing the subbands.

For claims 45-46, see the rejection of at least claims 38-39.

For claims 51-52, see the rejection of at least claims 38-39, and a program is provided by Chui in at least Fig. 3 showing software program modules for the computer workstation.

Allowable Subject Matter

10. Claims 1-17 are allowed.

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M Johnson whose telephone number is 703-306-3096. The examiner can normally be reached on Monday – Friday from 5:30 to 2:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta, can be reached on Monday – Friday from 9:30 to 5:00. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy M. Johnson
Patent Examiner
Art Unit 2625
April 01, 2004


TIMOTHY M. JOHNSON
PRIMARY EXAMINER